

**Exercise 1** Let functions  $r$  and  $s$  be defined by the table below.

$t$	-4	-3	-2	-1	0	1	2	3	4
$r(t)$	4	1	2	3	0	-3	2	-1	-4
$s(t)$	-5	-6	-7	-8	0	8	7	6	5

**Problem 1.1** Determine:

- $(s \circ r)(3) = \boxed{-8}$
- $(s \circ r)(-4) = \boxed{5}$
- $(s \circ r)(0) = \boxed{0}$

**Problem 1.2** Select all the values that are in the domain of  $r$ .

Select All Correct Answers:

- (a) -8
- (b) -7
- (c) -6
- (d) -5
- (e) -4 ✓
- (f) -3 ✓
- (g) -2 ✓
- (h) -1 ✓
- (i) 0 ✓
- (j) 1 ✓
- (k) 2 ✓
- (l) 3 ✓
- (m) 4 ✓
- (n) 5
- (o) 6

(p) 7

(q) 8

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**Problem 1.3** *Select all the values that are in the domain of  $s$ .*

**Select All Correct Answers:**

(a)  $-8$

(b)  $-7$

(c)  $-6$

(d)  $-5$

(e)  $-4$  ✓

(f)  $-3$  ✓

(g)  $-2$  ✓

(h)  $-1$  ✓

(i)  $0$  ✓

(j)  $1$  ✓

(k)  $2$  ✓

(l)  $3$  ✓

(m)  $4$  ✓

(n)  $5$

(o)  $6$

(p)  $7$

(q)  $8$

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**Problem 1.4** *Select all the values that are in the range of  $r$ .*

**Select All Correct Answers:**

(a)  $-8$

- (b)  $-7$
  - (c)  $-6$
  - (d)  $-5$
  - (e)  $-4$  ✓
  - (f)  $-3$  ✓
  - (g)  $-2$  ✓
  - (h)  $-1$  ✓
  - (i)  $0$  ✓
  - (j)  $1$  ✓
  - (k)  $2$  ✓
  - (l)  $3$  ✓
  - (m)  $4$  ✓
  - (n)  $5$
  - (o)  $6$
  - (p)  $7$
  - (q)  $8$
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**Problem 1.5** *Select all the values that are in the range of  $s$ .*

**Select All Correct Answers:**

- (a)  $-8$  ✓
- (b)  $-7$  ✓
- (c)  $-6$  ✓
- (d)  $-5$  ✓
- (e)  $-4$
- (f)  $-3$
- (g)  $-2$
- (h)  $-1$

- (i) 0 ✓
  - (j) 1
  - (k) 2
  - (l) 3
  - (m) 4
  - (n) 5 ✓
  - (o) 6 ✓
  - (p) 7 ✓
  - (q) 8 ✓
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**Problem 1.6** *Select all the values that are in the domain of  $s \circ r$ .*

**Select All Correct Answers:**

- (a)  $-8$
- (b)  $-7$
- (c)  $-6$
- (d)  $-5$
- (e)  $-4$  ✓
- (f)  $-3$  ✓
- (g)  $-2$  ✓
- (h)  $-1$  ✓
- (i)  $0$  ✓
- (j)  $1$  ✓
- (k)  $2$  ✓
- (l)  $3$  ✓
- (m)  $4$  ✓
- (n)  $5$
- (o)  $6$

(p) 7

(q) 8

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**Problem 1.7** *Select all the values that are in the domain of  $r \circ s$ .*

**Select All Correct Answers:**

(a)  $-8$

(b)  $-7$

(c)  $-6$

(d)  $-5$

(e)  $-4$

(f)  $-3$

(g)  $-2$

(h)  $-1$

(i) 0 ✓

(j) 1

(k) 2

(l) 3

(m) 4

(n) 5

(o) 6

(p) 7

(q) 8

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